Message

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Sent: 9/10/2020 1:15:07 PM
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Subject: FW: Third Site - Draft Supplemental Sampling Work Plan
Attachments: Third Site Supplemental Sampling Work Plan DRAFT052019.pdf

Good morning Suzanne:
Please see the following comments on the work plan.
Thank you,
Matt

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1. Page 3; Section 2.2: Some of the velocities seem very high. The estimated flow velocities should be evaluated for consistency with the assumed plume extent and the timing of releases. It's another line of evidence for the hydraulic conductivities.

2. Page 3; Section 2.2: The water levels in the pond are consistent with water levels in monitoring wells near the pond's northern edge which would suggest there is some connection. The water levels in the pond are, however, 6 feet higher than the water levels in the monitoring wells south of the pond, so the connection is weak. This is a better line of evidence than the lack of response in pond levels to the pumping test. The large volume of the pond would not allow a real measurable change in levels due to the modest nearby pumping.

3. Page 6; Section 3.2: Please indicate if the top of the TPZs will be surveyed. Also, the type of grout that will be used to backfill the boreholes to the base of the Upper Sand and Gravel should be specified.

4. Figure 6:
   a) The plan should discuss the potential for surface water sampling in areas where ground water may discharge to the stream(s).

   b) The southwest line could be extended farther to the northwest, though it is recognized that clearing would likely be necessary.

   c) The potential need for a step-out line even farther southwest should be considered and discussed.

5. Page i; Table of Contents: Section 3.3 of the work plan does not exist. Revise accordingly.

6. Page 1; Section 1: The first sentence references "Ramboll." Revise to state "Ramboll Environ."

7. Page 4; Section 2.3: The third paragraph indicates that *"Concentrations indicative of VOC Plume 1 and 2 are presented in Figure 5."* Please note that Figure 5 does not identify or differentiate the wells related to Plume 1 or Plume 2. Either revise this statement or revise Figure 5 to show which wells are related to Plumes 1 and 2.

8. Pages 5-6; Section 3.1: This section describes the proposed groundwater sampling and chemical laboratory analysis. However, there are no references to Third Site's UFP-QAPP. Does Geosyntec plan to adhere to the field sampling and laboratory analysis QA procedures specified in the existing UFP-QAPP or will a new UFP-QAPP addendum be required? Address the use of a UFP-QAPP in Section 3.1.

9. Page 6: Section 3.2: Temporary piezometers (TPZ) should be surveyed in the field for their locations, top of casing elevations, and ground surface elevations. Specify this in the work plan.

10. Page 8; Section 5: Include Third Site's UFP-QAPP in the references section.

11. Figure 3: Figure 3 indicates the surface water elevation in Bankert Pond was gauged at 875 feet above mean sea level (msl). This is just 0.5 feet above the interpreted groundwater elevation contour line located at the north end of Bankert Pond. As such, this suggests the surface water in Bankert Pond is likely in hydraulic communication with the shallow water table (and perhaps Plume 2) located within the Upper Till Unit at Third Site. If so, specify this in Section 2.2.

12. Figures 3 and 4: Groundwater contours that are not supported by existing data points (control points) should be depicted with dashed lines instead of solid lines. This is especially true with respect to the contours approaching the west side of Bankert Pond due to the lack of control points.

13. Figures 3 and 4: If available, present surface water elevations along Finley Creek on Figures 3 and 4.

14. General Comment: Replace the words "Paleolithic channel" with "Paleochannel" throughout the document. Paleolithic is a term used to describe a period of the Stone Age, estimated to be about 2.4 million years ago. Paleochannel is described as an ancient channel that has been filled or buried by younger sediment.

15. Section 2.3 Contaminant Distribution. Explain the significance of MW-28 in this section and why it represents the focus of this Supplemental Sampling Work Plan.

16. Section 3.1 Groundwater Sampling and Hydraulic Analysis Using Direct Push Sampling Equipment. Will the use of an onsite laboratory for analysis of groundwater samples during the implementation of the Waterloo profiling system be considered?

17. Section 3.2 Temporary Piezometer Installation. Explain in this section what the basis will be for the vertical placement of the screen interval in the event the saturated thickness of the Upper Sand and Gravel Unit is greater than 10 feet.

18. General Comment: The report mentions data gaps in the conceptual site model in the Introduction (Section 1) and Objectives (Section 1.2) but are not elaborated on. What aspect of the conceptual site model are these data gaps prevalent and what is the significance of them?

19. Page 4; Section 2.3: There is no citation or reference for stated maximum observed total volatile organic compound concentrations in VOC Plume 1 and Plume 2; only the date, March 2016, is mentioned. Please provide appropriate in-text citation and associated reference for document this data is being referenced from.

20. Page 6; Section 3.1: 12 borings in 3 transects for the use of the Waterloo are proposed for groundwater sampling and hydraulic analysis but only 10 are identified in Figure 6. Are the two "Waterloo Location – Completed as Temporary Piezometer" marked in Figure 6 going to be first used for groundwater sampling and hydraulic analysis before installation of the piezometer? Please clarify.
21. PDF Page 12; Figure 1: Only a general description is given for the general location of VOC Plumes 1 and 2 (Section 2.3). Recommend displaying VOC Plume 1 and 2 locations in one or more of the figures for spatial reference.
22. General Comment: What modeling has been done to predict the movement of Plumes 1 and 2? What is the inferred effect of depressions in the groundwater potentiometric surface around extraction wells EW-1, EW-4, and EW-5 (previously stated in Section 2.2) on plume migration?

From: Suzanne OHara <SOHara@Geosyntec.com>
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Subject: Third Site - Draft Supplemental Sampling Work Plan

Matt

I am a colleague of Gary's at Geosyntec and have been working with Gary, Ramboll, and the Trust on the supplemental sampling plan for the Third Site. Please find attached the draft Supplemental Sampling Work Plan, which has been prepared to describe the supplemental sampling investigation to provide additional data to support a remedial alternatives analysis.

Please let us know if you have any questions or comments on the Work Plan.

Best regards

Suzanne

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